



EMerge ALLIANCE ADVANCES DC POWER DISTRIBUTION PLATFORM TO FOCUS ON ENERGY EFFICIENT DATA CENTERS

Organization forms new technical committee, expands advisory council and adds members

SAN RAMON, CALIF. (Oct. 19, 2010) – The EMerge Alliance – an open industry association leading the rapid adoption of safe direct-current (DC) power distribution standards for commercial buildings – today announced it has formed a new technical standard committee for data and telecommunications centers and added 11 new members as part of the group's planned expansion to address building-wide opportunities for reduced power consumption.

In response to the ongoing need for improved reliability and energy efficiency in data centers, along with a growing interest in the benefits of DC power distribution, the EMerge Alliance is developing a 380-volt DC power standard for inclusion in its hybrid alternating current (AC) and DC microgrid platform. This open architecture focuses on reducing or eliminating inefficient AC to DC conversions that occur between power sources and digital devices in commercial buildings by converting and distributing power in DC form. More than 70 organizations have now joined the Alliance in support of this approach, and membership continues to grow.

Newest members include Cooper Industries, DTE Energy, Emerson Network Power and Spear Point Energy at the Participating level; TSM / LEDingEDGE and Verve Living Systems, a subsidiary of Masco Corporation, at the General level; Intel and Electric Power Research Institute (EPRI) at the Corresponding level; Enviro Energy Partners and FSP–Powerland Technology at the Supporting level; and the Connected Vehicle Trade Association at the Liaison level. The Alliance has also appointed new advisory council members, including Anthony Brower, Gensler; Brian Fortenberry, EPRI; Bill Tschudi, Lawrence Berkeley National Laboratory; Konstantinos Papamichael, Ph.D., California Lighting Technology Center, University of California, Davis; Nana Wilberforce, The PNC Financial Services Group; and Kurt Yeager, The Galvin Electricity Initiative.

According to Alliance Chairman Brian Patterson, the EMerge platform can offer significant energy savings to a broad range of commercial facilities, with some of the greatest opportunities in offices and high-tech buildings.

“The completion of our first 24-volt DC standard for interior spaces has established a foundation and roadmap for specification of DC-based systems in other settings,” said Patterson. “We’re moving forward with the next phase of our plan, which will help make DC power distribution a reality in data centers and, ultimately, for entire buildings.”

In addition to energy savings, other potential benefits of DC power distribution in computing environments include improved power quality, reduced cooling needs, higher equipment densities, reduced heat-related failures, improved reliability and simplified, more efficient integration of on-site renewable energy generation.

The Alliance board has appointed EPRI's Dennis Symanski to chair the new standard committee, which will involve a collaboration of power, infrastructure, controls and device manufacturers, and others who can provide products and services needed to support the implementation of this standard.

A new Corresponding membership classification has also been created to allow government, academic and other interested parties to contribute to the development of EMerge standards through participation in technical committees.

“In order to accelerate market adoption of DC power distribution with telco and IT data centers and beyond, we need industry-wide participation to develop a standard that will enable compatibility and interoperability of all parts of the system,” said Guy AlLee, a research scientist with Intel Labs. “The secret to maximizing energy efficiency is to use the highest possible voltage with the fewest number of power conversions while staying with volume components. We’re working on solutions that can accomplish both for significant savings in data centers.”

A strong proponent for DC microgrids in commercial and industrial facilities, including data centers, Intel Labs is planning an installation that will showcase both 24- and 380-volt DC EMerge standards at its New Mexico Energy Systems Research Center, including photovoltaic (PV), a world-class PUE data center, energy storage, office lighting and electric vehicle (EV) charging.

Additionally, research and evaluation of a DC-powered modular data center is already underway at the University of California, San Diego (UCSD), where researchers are monitoring the energy efficiency of information and communication technologies. The project has incorporated custom first-generation 380-volt DC equipment that is expected to evolve to commercial availability through the work of the EMerge Alliance membership. UCSD is also home to one of the first EMerge 24-volt DC microgrid systems in the nation, which incorporates on-site solar panels and was deployed in the school's new [Sustainability Resource Center](#) in 2009.

About the EMerge Alliance

The EMerge Alliance is an open industry association leading the rapid adoption of safe DC power distribution in commercial buildings through the development of EMerge Alliance standards. These innovative standards integrate interior infrastructures, power, controls and devices in a common microgrid platform to facilitate the hybrid use of AC and DC power throughout buildings for unprecedented design and space flexibility, greater energy efficiency and improved sustainability. The not-for-profit Alliance is accepting new members at various levels. For more information, please visit www.EMergeAlliance.org.

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